

【Sequence listing】

<110> Scigen Harvest Co., Ltd.

<120> Genes for S-adenosyl L-methionine:jasmonic acid carboxyl methyl transferase and a method for the development of pathogen- and stress-resistant plants using the genes

<130> OPF0154

<150> KR
<151> 2000-06-13

<160> 5

<170> KopatentIn 1.71

<210> 1

<211> 1170

<212> DNA

<213> *Arabidopsis thaliana*

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aatgacttca actacatatg tgcttcttg ccagatttt acgaccgggt taataataac 360
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ggttcgttct acggacgttt gtttccctgc cggagcccttc actttgtca ttcttcttct 480
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cataaagctt atgctcttca attccaaact gatttcttgg tttttttagt gtcacgtatct 660
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<210> 2
 <211> 1476
 <212> DNA
 <213> Arabidopsis thaliana

<220>
 <221> CDS
 <222> (15)..(1181)
 <223> open reading frame for JMT

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gga aac ggg gaa aca agt tat gcc aag aac tcc acc gct cag agc aac				95
Gly Asn Gly Glu Thr Ser Tyr Ala Lys Asn Ser Thr Ala Gln Ser Asn				
15	20	25		

ata ata tct cta ggc aga aga gta atg gac gag gcc ttg aag aag tta				143
Ile Ile Ser Leu Gly Arg Arg Val Met Asp Glu Ala Leu Lys Lys Leu				
30	35	40		

atg atg agc aat tca gag att tcg agc att gga atc gcc gac tta ggc				191
Met Met Ser Asn Ser Glu Ile Ser Ser Ile Gly Ile Ala Asp Leu Gly				
45	50	55		

tgc tcc tcc ggt ccg aac agt ctc ttg tcc atc tcc aac ata gtt gac				239
Cys Ser Ser Gly Pro Asn Ser Leu Leu Ser Ile Ser Asn Ile Val Asp				
60	65	70	75	

acg atc cac aac ttg tgt cct gac ctc gac cgt cca gtc cct gag ctc				287
Thr Ile His Asn Leu Cys Pro Asp Leu Asp Arg Pro Val Pro Glu Leu				
80	85	90		

aga gtc tct ctc aac gac ctc cct agc aat gac ttc aac tac ata tgt	335
Arg Val Ser Leu Asn Asp Leu Pro Ser Asn Asp Phe Asn Tyr Ile Cys	
95 100 105	
gct tct ttg cca gag ttt tac gac cgg gtt aat aat aac aag gag ggt	383
Ala Ser Leu Pro Glu Phe Tyr Asp Arg Val Asn Asn Lys Glu Gly	
110 115 120	
tta ggg ttc ggt cgt gga gga gaa tcg tgt ttt gtg tcg gcc gtc	431
Leu Gly Phe Gly Arg Gly Gly Glu Ser Cys Phe Val Ser Ala Val	
125 130 135	
cca ggt tcg ttc tac gga cgt ttg ttt cct cgc cgg agc ctt cac ttt	479
Pro Gly Ser Phe Tyr Gly Arg Leu Phe Pro Arg Arg Ser Leu His Phe	
140 145 150 155	
gtg cat tct tct tct agt tta cat tgg ttg tct cag gtt cca tgt cgt	527
Val His Ser Ser Ser Leu His Trp Leu Ser Gln Val Pro Cys Arg	
160 165 170	
gag gcg gag aag gaa gac agg aca ata aca gct gat tta gaa aac atg	575
Glu Ala Glu Lys Glu Asp Arg Thr Ile Thr Ala Asp Leu Glu Asn Met	
175 180 185	
ggg aaa ata tac ata tca aag aca agt cct aag agt gca cat aaa gct	623
Gly Lys Ile Tyr Ile Ser Lys Thr Ser Pro Lys Ser Ala His Lys Ala	
190 195 200	
tat gct ctt caa ttc caa act gat ttc ttg gtt ttt ttg agg tca cga	671
Tyr Ala Leu Gln Phe Gln Thr Asp Phe Leu Val Phe Leu Arg Ser Arg	
205 210 215	
tct gag gag ttg gtc ccg gga ggc cga atg gtt tta tcg ttc ctt ggt	719
Ser Glu Glu Leu Val Pro Gly Gly Arg Met Val Leu Ser Phe Leu Gly	
220 225 230 235	
aga aga tca ctg gat ccc aca acc gaa gag agt tgc tat caa tgg gaa	767
Arg Arg Ser Leu Asp Pro Thr Thr Glu Glu Ser Cys Tyr Gln Trp Glu	
240 245 250	
ctc cta gct caa gct ctt atg tcc atg gcc aaa gag ggt atc atc gag	815
Leu Leu Ala Gln Ala Leu Met Ser Met Ala Lys Glu Gly Ile Ile Glu	
255 260 265	
gaa gag aag atc gat gct ttc aac gct cct tac tat gct gcg agc tcc	863
Glu Glu Lys Ile Asp Ala Phe Asn Ala Pro Tyr Tyr Ala Ala Ser Ser	
270 275 280	
gaa gag ttg aaa atg gtg ata gag aaa gaa ggg tca ttt tcg atc gat	911

Glu	Glu	Leu	Lys	Met	Val	Ile	Glu	Lys	Glu	Gly	Ser	Phe	Ser	Ile	Asp	
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agg ctt gag ata agt ccg att gat tgg gaa ggt ggg agt atc agt gag															959	
Arg	Leu	Glu	Ile	Ser	Pro	Ile	Asp	Trp	Glu	Gly	Gly	Ser	Ile	Ser	Glu	
300							305			310			315			
gag agt tat gac ctt gca ata agg tcc aaa ccc gaa gcc cta gct agt															1007	
Glu	Ser	Tyr	Asp	Leu	Ala	Ile	Arg	Ser	Lys	Pro	Glu	Ala	Leu	Ala	Ser	
320							325					330				
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Gly	Arg	Arg	Val	Ser	Asn	Thr	Ile	Arg	Ala	Val	Val	Glu	Pro	Met	Leu	
335							340					345				
gaa cct act ttc ggt gaa aat gtg atg gac gag ctt ttt gaa agg tat															1103	
Glu	Pro	Thr	Phe	Gly	Glu	Asn	Val	Met	Asp	Glu	Leu	Phe	Glu	Arg	Tyr	
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gca aag atc gtg gga gag tac ttc tat gta agc tcg cca cga tac gct															1151	
Ala	Lys	Ile	Val	Gly	Glu	Tyr	Phe	Tyr	Val	Ser	Ser	Pro	Arg	Tyr	Ala	
365							370				375					
att gtt att ctt tcg ctc gtt aga acc ggt															tgatcgatgtataacat	1200
Ile	Val	Ile	Leu	Ser	Leu	Val	Arg	Thr	Gly							
380							385									
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cctttttttt tttcttcat ttacggtaga cctatagttat taaaacaaat agaatcagct															1380	
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 <211> 389
 <212> PRT
 <213> Arabidopsis thaliana

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Glu	Ile	Ser	Ser	Ile	Gly	Ile	Ala	Asp	Leu	Gly	Cys	Ser	Ser	Gly	Pro
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Asn	Ser	Leu	Leu	Ser	Ile	Ser	Asn	Ile	Val	Asp	Thr	Ile	His	Asn	Leu
65							70				75		80		
Cys	Pro	Asp	Leu	Asp	Arg	Pro	Val	Pro	Glu	Leu	Arg	Val	Ser	Leu	Asn
							85				90		95		
Asp	Leu	Pro	Ser	Asn	Asp	Phe	Asn	Tyr	Ile	Cys	Ala	Ser	Leu	Pro	Glu
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Phe	Tyr	Asp	Arg	Val	Asn	Asn	Asn	Lys	Glu	Gly	Leu	Gly	Phe	Gly	Arg
							115				120		125		
Gly	Gly	Gly	Glu	Ser	Cys	Phe	Val	Ser	Ala	Val	Pro	Gly	Ser	Phe	Tyr
							130				135		140		
Gly	Arg	Leu	Phe	Pro	Arg	Arg	Ser	Leu	His	Phe	Val	His	Ser	Ser	
							145				150		155		160
Ser	Leu	His	Trp	Leu	Ser	Gln	Val	Pro	Cys	Arg	Glu	Ala	Glu	Lys	Glu
							165				170		175		
Asp	Arg	Thr	Ile	Thr	Ala	Asp	Leu	Glu	Asn	Met	Gly	Lys	Ile	Tyr	Ile
							180				185		190		
Ser	Lys	Thr	Ser	Pro	Lys	Ser	Ala	His	Lys	Ala	Tyr	Ala	Gln	Phe	
							195				200		205		
Gln	Thr	Asp	Phe	Leu	Val	Phe	Leu	Arg	Ser	Arg	Ser	Glu	Glu	Leu	Val
							210				215		220		
Pro	Gly	Gly	Arg	Met	Val	Leu	Ser	Phe	Leu	Gly	Arg	Arg	Ser	Leu	Asp
							225				230		235		240
Pro	Thr	Thr	Glu	Glu	Ser	Cys	Tyr	Gln	Trp	Glu	Leu	Leu	Ala	Gln	Ala
							245				250		255		
Leu	Met	Ser	Met	Ala	Lys	Glu	Gly	Ile	Ile	Glu	Glu	Lys	Ile	Asp	
							260				265		270		
Ala	Phe	Asn	Ala	Pro	Tyr	Tyr	Ala	Ala	Ser	Ser	Glu	Glu	Leu	Lys	Met
							275				280		285		
Val	Ile	Glu	Lys	Glu	Gly	Ser	Phe	Ser	Ile	Asp	Arg	Leu	Glu	Ile	Ser
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Pro Ile Asp Trp Glu Gly Gly Ser Ile Ser Glu Glu Ser Tyr Asp Leu
 305 310 315 320

Ala Ile Arg Ser Lys Pro Glu Ala Leu Ala Ser Gly Arg Arg Val Ser
 325 330 335

Asn Thr Ile Arg Ala Val Val Glu Pro Met Leu Glu Pro Thr Phe Gly
 340 345 350

Glu Asn Val Met Asp Glu Leu Phe Glu Arg Tyr Ala Lys Ile Val Gly
 355 360 365

Glu Tyr Phe Tyr Val Ser Ser Pro Arg Tyr Ala Ile Val Ile Leu Ser
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Leu Val Arg Thr Gly
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<210> 4
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> 5' primer for PCR of JMT gene

<400> 4
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<210> 5
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> 3' primer for PCR of JMT gene

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